

# 2000 Edition

## Instructor Manual

# 2

## Shipping Papers

Benjamin Meese Paints

Delivery Address:  
Benjamin Meese Paints  
3654 Mt. Vernon St.  
Richmond, VA 23234

Billing Address:

HM	No. of Units	Shipping Description	Total Quantity
	10 Ctns.	Paint, 3, UN 1263, PG II	225 kg

**Emergency Contact:** 1-800-255-3924

This is to certify that the above-named materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transportation.

Signed:

Date:

*St. Baker*  
03-27-99

SAFETY BEGINS WITH YOU!

## HAZARDOUS MATERIALS TRANSPORTATION TRAINING MODULES



U.S. Department of Transportation  
Research and Special Programs  
Administration

# Script

## Visual

## Narrative

1

**MODULE 2  
SHIPPING PAPERS**

XYZ Chemical Company  
2004 Main Street  
Wolfsburg, NY 62009

Delivery Address:  
Henderson Champark  
54 Tanglewood Rd.  
Anytown, USA

Billing Address:

ID#	No. of Units	Shipping Description	Total Quantity
X	10 Drums	Flammable Liquid, Prop. 2, UN 1203, PG2 (Furan & Additive)	200 gal
	25 Boxes	Newspaper Supplements	500 kg
X	10 Boxes	Corrosive Acid, UN 2802, PG II	200 kg

Module 2, Shipping Papers

2



The term “shipping paper,” as used by the transportation industry, means the piece of paper or document used for billing, accountability and other day-to-day activities of transporting hazardous materials.

As used in the HMR, “shipping paper” means the documentation or paper containing the hazardous materials information required by the regulations.

The Federal hazmat law (§ 5110, Chapter 51) requires the retention of the shipping paper for one year by the offerer and carrier.

**171.8**

## 3

**SHIPPING PAPER**

**Unless a Hazardous Waste:**

- ☐ Use any document
- ☐ Must have all required entries

Except for hazardous waste, there is no specific shipping paper “form” required for hazardous material shipments. Shippers may use whatever form or design appropriate to their operation.

171.8

**STUDENT RESPONSE NOTE 1-3**

A shipping paper may be in any form or format as long as it contains the information required by the HMR in the correct sequence.

## 4

**SHIPPING PAPER**

XYZ Chemical Company  
300 Main Street  
Westburg, NY 12099

Delivery Address: Westburg Chemical  
64 Townsend Rd  
Anytown USA

Shipping Address:

ID No.	No. of Units	Shipping Description	Total Quantity
2	4 Drums	Flammable Liquid, Class 3, UN 1993, PG I (Flame & Explosion)	200 gal (756 L)
27	20 Boxes	Hazardous Substances	200 kg
2	10 Drums	Corrosive Acid, Class 8, UN 2055, PG II	200 kg





Unless excepted, each person who offers a hazardous material for transportation must accurately describe the material on the shipping paper.

172.200(a)

## 5

**SHIPPING PAPER**

 Benzene, 3, UN1114, II, 90kg



The shipping paper must contain the basic description plus any required additional descriptions or entries. The basic description includes the proper shipping name, the hazard class or division, the identification number (ID No.) and packing group (PG), if any is assigned, always in that order.

172.200(a)

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**STUDENT RESPONSE NOTE 4-5**

The basic description of a hazardous material includes: the proper shipping name, hazard class or division, ID No., and packing group (PG) if any is assigned. Shipping papers must also list all required additional entries.

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**6**


All shipping paper entries must be legible and printed in English. No unauthorized abbreviations are permitted.

**172.201(a)(2-3)**

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**7**


A shipping paper may have more than one page. Each page must be numbered consecutively. The first page must specify the total number of pages.

**172.201(c)**

## 8

**SHIPPING PAPERS**

Communicate the hazard(s)  
of the materials  
being transported

A shipping paper must accurately communicate the hazards of the materials in the packages and on the transport vehicle.

## 9

**BASIC DESCRIPTION**

1. Proper shipping name
2. Hazard class or division
3. Identification number
4. Packing group

This communication includes: the basic description of the materials, that is, the proper shipping name,

**172.202(a)(1)**

## 10

Sym- bols	Hazardous materials descriptions and proper shipping names	Hazard class or Di- vision	Identifica- tion Num- bers	PG	Label Codes
(1)	(2)	(3)	(4)	(5)	(6)
	Acetallene, see p- Nitrosodimethylaniline				
	Accumulators, electric, see Batteries, wet etc.				
D	Accumulators, pressurized, pneu- matic or hydraulic (containing non- flammable gas)	2.2	NA1956	2.2	
	Acetal	3	UN1088	II	3
	Acetaldehyde	3	UN1089	I	3
A	Acetaldehyde ammonia	9	UN1841	III	9
	Acetaldehyde oxime	3	UN2332	III	3
	Acetic acid, glacial or Acetic acid so- lution, with more than 80 percent acid, by mass	6	UN2789	II	6, 3
	Acetic acid solution, with more than 50 percent but not more than 80	8	UN2790	II	8

[located in Column 2 of the HMT];

**172.101**

11

**BASIC DESCRIPTION**

1. Proper shipping name
2. Hazard class or division
3. Identification number
4. Packing group

the corresponding hazard class or division,  
172.202(a)(2)

12

§172.101 HAZARDOUS MATERIALS TABLE					
Symbols	Hazardous materials descriptions and proper shipping names	Hazard class or Division	Identification Numbers	PG	Label Codes
(1)	(2)	(3)	(4)	(5)	(6)
	Acetaldehyde, see p- Nitrosodimethylaniline. Accumulators, electric, see Batteries, wet, etc.	2.2	NA1955	2.2	.....
D	Accumulators, pressurized, pneu- matic or hydraulic (containing non- flammable gas)	3	UN1088	II	3
	Acetal	3	UN1089	I	3
	Acetaldehyde	3	UN1088	II	3
A	Acetaldehyde ammonia	9	UN1841	III	9
	Acetaldehyde oxime	3	UN2332	III	3
	Acetic acid, glacial or Acetic acid so- lution, with more than 80 percent acid by mass	8	UN2789	II	8, 3
	Acetic acid solution, with more than 10 percent but not more than 80	8	UN2790	II	8

[located in Column 3 of the HMT];  
172.101

13

**BASIC DESCRIPTION**

1. Proper shipping name
2. Hazard class or division
3. Identification number
4. Packing group

the corresponding ID No.,  
172.202(a)(3)

## 14

§172.101 HAZARDOUS MATERIALS TABLE					
Symbols	Hazardous materials descriptions and proper shipping names	Hazard class or Division	Identification Numbers	PG	Label Codes
(1)	(2)	(3)	(4)	(5)	(6)
	Butyl vinyl ether, inhibited .....	3	UN2552	II	3
	n-Butylamine .....	3	UN1125	II	3, 8
	n-Butylamine .....	6.1	UN2738	II	6.1
	tert-Butylcyclohexylchloroformate .....	6.1	UN2747	III	6.1
	Butylene see also Petroleum gases, liquefied .....	2.1	UN1012		2.1
	1,2-Dibutene oxide, stabilized .....	3	UN3022	II	3
	Butyltoluenes .....	6.1	UN2667	III	6.1

[located in Column 4 of the HMT]; and

172.101

## 15

BASIC DESCRIPTION	
1. Proper shipping name	
2. Hazard class or division	
3. Identification number	
4. Packing group	

the packing group in Roman numerals.

172.202(a)(4)

## 16

§172.101 HAZARDOUS MATERIALS TABLE					
Hazardous materials descriptions and proper shipping names	Hazard class or Division	Identification Numbers	PG	Label Codes	Special provisions
(2)	(3)	(4)	(5)	(6)	(7)
Acrylamide .....	6.1	UN2074	III	6.1	T8
Acrylic acid, inhibited .....	6.1	UN2015	II	6.1	B2, T8
Acrylonitrile, inhibited .....	3	UN1093	I	3, 6.1	B9, T18, T26
Actuating cartridge, explosive, see Cartridges, power device.					
Adhesives, containing a flammable liquid .....	3	UN1133	I	3	B42, T7, T30
Adiponitrile .....			II	3	B52, T7, T30
Aerosols, corrosive. Packing Group I or II, (each not exceeding 1 L capacity) .....	2.2	UN1950	III	3	B1, B52, T7, T30
Aerosols, flammable (each not ex-	2.1	UN1950	III	2.2, 8	T1
				2.1	A34
					N82

[located in Column 5 of the HMT].

On the shipping paper you may place the letters “PG” before the packing group number.

172.101

## 17

<b>BASIC DESCRIPTION</b>			
HM	No. of Units	Shipping Description	Total Quantity
	1 Drum	Zinc resinate, 4.1, UN 2714, PG III	75 kg

1. Proper shipping name  
2. Hazard class or division  
3. Identification number  
4. Packing group

In that sequence, unless otherwise provided

Remember: The basic description is the proper shipping name, the hazard class or division, the ID No., and the Packing Group; and in that sequence.

**172.202(a)(1)-(4), (b)**

### STUDENT RESPONSE NOTE 6-17

The shipping paper must accurately communicate the hazard(s). It must list the basic description, that is: the proper shipping name, hazard class or division, ID No., and PG.

## 18

<b>"TOTAL QUANTITY"</b>
<input type="radio"/> May be gross or net weight <input type="radio"/> Show unit of measure <input type="radio"/> Enter on shipping paper - Before basic description, or - After basic description, or - Before and after basic description

Except for empty packaging, cylinders for Class 2 materials and bulk packagings, the total quantity of the material, which is part of the Shipping Description, must be shown before and/or after the basic description.

The total quantity must include the unit of measurement, such as liters (gallons) or kilograms (pounds). Quantity can be shown as gross or net.

**171.10;172.202(a)(5), (c)**

### STUDENT RESPONSE NOTE 18

The shipping description includes the proper shipping name, hazard class or division, ID No., and PG plus the total quantity of the hazardous material.



## 19

**"TOTAL QUANTITY"**

- Indicate total quantity for:
  - Cylinders containing Class 2
  - Bulk Packagings
- Examples: 10 cylinders  
1 cargo tank

For cylinders (for class 2 materials) and bulk packagings, some indication of the total quantity must be shown (e.g., “10 cylinders” or “1 cargo tank”). The total quantity, type of packaging and destination mark may be entered in any appropriate manner before or after the basic description.

**172.202(a)(5), (c)**

## STUDENT RESPONSE NOTE 19

The total quantity, the type of packaging and destination marks may be entered before or after the basic description.

## 20

## ABBREVIATIONS

[illegible]

Abbreviations for the total quantity may be used on the shipping paper. You may abbreviate the type of packaging and/or unit of measurements, for example: carton, box, drum, kilograms, liters. Place the total quantity before and/or after the basic description.

**Example:** 10 ctns., Paint, 3, UN 1263, PG II, 225 kg.

**172.202(c)**

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**STUDENT RESPONSE NOTE 20**

List total quantity before and/or after the basic description. You may abbreviate the type of package and the unit of measurement.

## 21

**BASIC DESCRIPTION**

**TABLE ENTRY**

Benzene	3	UN1114	II
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**SHIPPING PAPER ENTRY**

HM	No. of Units	Shipping Description	Total Quantity
	15 drums	Benzene, 3, UN 1114, PG II	300 gal.

The basic description must be shown in the HMT sequence: proper shipping name (PSN), hazard class or division, ID No. and Packing Group.

**Example:** Benzene, 3, UN 1114, PG II, in that order!

However, technical and chemical group names may be entered in parenthesis between the proper shipping name and the hazard class or following the basic description.

**Example:** Corrosive liquid, n.o.s., (Caprylyl chloride), 8, UN1760, II, in that order!

**172.202(b), (d)**

## 22

**ADDITIONAL INFORMATION**

1. Must be AFTER the basic description, except...
2. May place technical name(s)
  - After the basic description
  - or
  - Between PSN and hazard class
3. May add class name or subsidiary class number
  - After primary hazard class number

Hazard class names, International Maritime Organization (IMO) class and division numbers, or subsidiary hazard class or division numbers may be entered in parentheses following the numerical hazard class. Additional information about the hazardous material may be put on a shipping paper. However, the information must not be inconsistent with the required description. Also, it must be placed after the basic description, unless otherwise permitted.

The addition of technical and chemical group names will be discussed later in this module.

**172.201(a)(4)**

## 23

**SHIPPING PAPER MIXED SHIPMENT**

HM	No. of Units	Shipping Description	Total Quantity
	4 Drums	Flammable Liquids, nos. 3, UN 1993, PG I (Furan & Acetone)	200 gal
	10 Boxes	Butyric Acid, 8, UN 2820, PG III	205 kg
	25 Boxes	Newspaper Supplements	300 kg

Emergency Contact: 1-800-424-9300

This is to certify that the above-named materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transportation.

Entered first or...

A hazardous material and a non-hazardous material may be placed on the same shipping paper. However, the hazardous material entries must be entered first, or

**172.201(a)(1)(i)**

## 24

**SHIPPING PAPER MIXED SHIPMENT**

HM	No. of Units	Shipping Description	Total Quantity
X	4 Drums	Flammable Liquids, nos. 3, UN 1993, PG I (Furan & Acetone)	200 gal
	25 Boxes	Newspaper Supplements	300 kg
X	10 Boxes	Butyric Acid, 8, UN 2820, PG III	205 kg

Emergency Contact: 1-800-424-9300

This is to certify that the above-named materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transportation.

Highlighted or contrasting color

Entered in a color that clearly contrasts with any description of a material not subject to the regulations (highlighting is authorized on reproduced copies of a shipping paper), or . . .

**172.201(a)(1)(ii)**

## 25

**SHIPPING PAPER MIXED SHIPMENT**

HM	No. of Units	Shipping Description	Total Quantity
	25 Boxes	Newspaper Supplements	300 kg
X	4 Drums	Flammable Liquids, nos. 3, UN 1993, PG I (Furan & Acetone)	200 gal
RQ	20 Boxes	Ammonium dichromate, 5.1, UN1439, PGII	170 kg
X	10 Boxes	Butyric Acid, 8, UN 2820, PG III	205 Kg

Emergency Contact: 1-800-424-9300

X or RQ

Identified by an “X” in a column captioned “HM.” Instead of an “X,” the letters “RQ,” for Reportable Quantity, may be entered in this column to identify a hazardous substance.

**172.201(a)(1)(iii)**

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**26**

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**HAZARDOUS MATERIALS  
&  
NON-HAZARDOUS MATERIALS**

**Hazardous Materials:  
Entered first, or  
Highlight/contrasting color  
"X" or "RQ" in HM column**

In summary, for mixed shipments of hazardous and non-hazardous materials, there are three methods for distinguishing the hazardous materials:

1. Enter the hazardous materials first;
2. Enter in a contrasting color; or
3. Put an "X" in the "HM" column, or "RQ" if it is also a hazardous substance.

**172.201(a)(1)**

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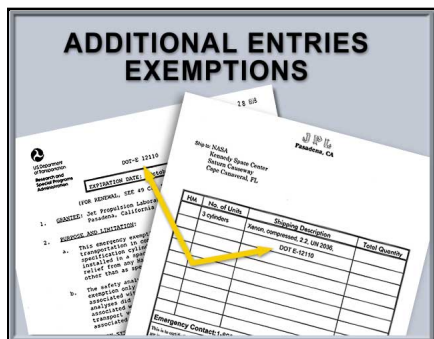
**STUDENT RESPONSE NOTE 21-26**

A mixed shipment of hazardous and non-hazardous material, must identify the hazardous material by: listing the HM first, or marking in the "HM" column an "X" or the letters "RQ".

**Student Activity**

Open your student manual to Work Project SP-1 on page 35 and follow the instructions. When you have completed and checked your work for accuracy, either review the work project with the instructor or check the answers on pages 46 and 47. Please pause the presentation and complete this Student Activity.

## 27



Sometimes additional information is required. The description is not complete unless the required additional information has been entered in the proper place.

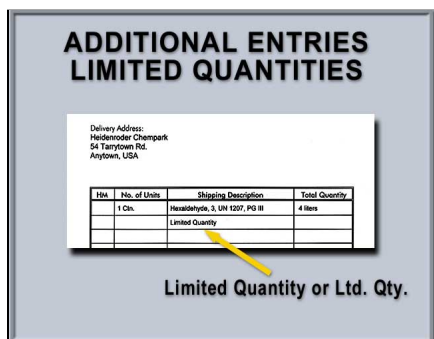
For example, USDOT has granted exemptions or relief from certain hazardous materials regulations for specific packagings or shipping procedures. If shipment is made under an exemption, the shipping paper must bear the letters “DOT-E” followed by the assigned exemption number. The exemption number must be placed so that it is clearly associated with the description to which the exemption applies.

**172.200(a); 172.203(a)**

## STUDENT RESPONSE NOTE 27

If shipment is made under an exemption, the shipping paper must include the letters “DOT-E” and the exemption number.

## 28



Some hazardous materials may be shipped as a limited quantity. If so, the words “Limited Quantity” or the abbreviation “Ltd. Qty.” must be on the shipping paper following the basic description.

**172.203(b)**

## STUDENT RESPONSE NOTE 28

For a limited quantity shipment, the words “Limited Quantity” or the abbreviation “Ltd. Qty.” must be entered, following the basic description.

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**29****ADDITIONAL ENTRIES  
HAZARDOUS SUBSTANCES**

RQ, Lead arsenates, 6.1, UN1617, PGII, 10 kg

RQ, Environmentally Hazardous Substances,  
Liquid, n.os., 9, UN3082, PGIII, (Amitrole), 454 kg

For hazardous substance shipments, the letters “RQ” must be entered on the shipping paper. Enter “RQ” before or after the basic description for each hazardous substance.

Some proper shipping names of hazardous substances do not identify the hazardous substance by name. In this case, the name of the hazardous substance component listed in Appendix A to the HMT must be entered in parentheses in association with the basic description.

In the example shown, Amitrole must be in parentheses.

**172.203(c)(1-2)**

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**STUDENT RESPONSE NOTE 29**

On the shipping paper, identify hazardous substances with the letters “RQ” before or after the basic description.

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**30****ADDITIONAL ENTRIES  
RADIOACTIVE MATERIAL**

- |                                                     |                                                  |
|-----------------------------------------------------|--------------------------------------------------|
| <input type="checkbox"/> Name of Radionuclides      | <input type="checkbox"/> Transport Index         |
| <input type="checkbox"/> Physical and Chemical Form | <input type="checkbox"/> Export Package Marking  |
| <input type="checkbox"/> Activity in Each Package   | <input type="checkbox"/> Fissile Material        |
| <input type="checkbox"/> Category of Label          | <input type="checkbox"/> DOE/NRC Package Marking |

Unless excepted, a shipment of radioactive material must include the appropriate additional shipping paper entries, as shown on this visual.

**172.203(d)**

## 31

<p><b>ADDITIONAL ENTRIES EMPTY PACKAGINGS</b></p> <p><b>"Residue Last Contained****"</b></p> <p><b>Hazardous Material - May Tank Car - Must</b></p>
-------------------------------------------------------------------------------------------------------------------------------------------------------------

For a packaging that contains a residue of a hazardous material, the shipping paper description may include the words "RESIDUE: Last Contained \*\*\*." These words should be followed by the name of the hazardous material residue. The entry should appear in association with the basic description.

For a tank car that contains only the residue of a hazardous material, the shipping paper description must include the words "RESIDUE: Last Contained \*\*\*" followed by the basic description of the hazardous material residue.

**Note:** Replace the 3 asterisks (\*\*\*) with the proper shipping name of the hazardous material.

**172.203(e)**

## STUDENT RESPONSE NOTE 30-31

For a packaging containing hazardous material residue, the phrase "RESIDUE: Last Contained \*\*\*" may appear on the shipping paper. For any residue in a tank car, "RESIDUE: Last Contained \*\*\*\*" must appear on the shipping paper.

## 32

<p><b>ADDITIONAL ENTRIES AIR</b></p>	
<p><b>SHIPPER'S DECLARATION FOR DANGEROUS GOODS</b></p> <p>Shipper Expire State Supply Co. 116 42nd Ave. New York, NY 11401</p> <p>Company K. O. Stueck AG 34 Steinbohlstr. 60594 Frankfurt Germany</p> <p>For optional use For Company logo Name and address</p>	<p>Air Waybill No. 0070-7634</p> <p>Page 1 of 3 Pages Shipper's Reference Number 1234567</p> <p><b>WARNING</b></p> <p>Failure to comply in all respects with the applicable dangerous goods regulations may be subject to the applicable law, subject to legal penalties. This Declaration must not, in any circumstances, be completed and/or signed by a consignor, transporter or other third party.</p> <p>Signature, Name, Date and Address XXXXXXXXXXXXXXXXXXXX XXXXXXXXXXXXXXXXXXXX</p>
<p><b>TRANSPORT DETAILS</b></p> <p>This document is valid from the Point of Departure unless otherwise specified.</p> <p>UN Number 12345 Proper shipping name: DANGEROUS Class or Division 1.2 Packing Group I</p> <p><b>Cargo Aircraft Only</b></p>	

The regulations prohibit or forbid transporting some materials aboard passenger carrying aircraft. The words "Cargo Aircraft Only" must follow the basic description on the shipping paper for these materials.

**172.203(f)**

## STUDENT RESPONSE NOTE 32

"Cargo Aircraft Only" must be entered on the shipping paper after the basic description when the material is prohibited or forbidden on passenger carrying aircraft.

## 33

ADDITIONAL ENTRIES RAIL			
HM	No. of Units	Shipping Description	Total Quantity
	1 T/C	Ethylene, refrigerated liquid, 2.1, UN 1038	30,000 Gal.
		GATX 12345	
		DOT 113 - Do not hump or cut off car while in motion.	



When a hazardous material is transported in a rail car, freight container, transport vehicle or portable tank, the shipping paper must include the reporting mark and number.

When a Division 2.1 (flammable gas) is being transported in a DOT-113 tank car, additional notations must be on the shipping paper. Identify the tank car, in this case, DOT-113. State the prohibition “Do Not Hump or Cut Off Car While in Motion.” This prohibition forbids moving the car under its own momentum, called “humping”. Uncoupling or cutting the car loose while in motion is forbidden as well.

**172.203(g)**

## STUDENT RESPONSE NOTE 33

For hazardous materials transported in a rail car, freight container, transport vehicle or portable tank, the reporting mark and number must be on the shipping paper.

## 34

ADDITIONAL ENTRIES HIGHWAY	
For Anhydrous ammonia in MC 330 or MC 331 Cargo Tanks: "0.2 PERCENT WATER" - QT tanks "NOT FOR Q AND T TANKS" - Less than 0.2% water	

When anhydrous ammonia containing 0.2% water or more by weight is transported by highway in either an MC 330 or MC 331 cargo tank, the shipping paper must have the notation: “0.2 PERCENT WATER”. The notation must follow the basic description.

When anhydrous ammonia contains less than 0.2% water by weight, the words “NOT FOR Q AND T TANKS” must be entered on the shipping paper, following the basic description.

**172.203(h)(1)**

## STUDENT RESPONSE NOTE 34

Anhydrous ammonia:

- If 0.2 percent or more water has been added, the shipping paper must have the notation “0.2 PERCENT WATER.”
- If 0.2 percent water has not been added, the shipping paper must say, “NOT FOR Q AND T TANKS.”



**35****ADDITIONAL ENTRIES  
HIGHWAY**

For Liquefied Petroleum Gas:  
"Noncorrosive" or "NONCOR"  
or  
"Not for Q and T tanks"

When noncorrosive liquefied petroleum gas (LPG) is transported by highway in a QT MC 330 or MC 331 cargo tank, the words "NONCORROSIVE" or "NONCOR" must be added to the shipping paper. This entry, following the basic description, indicates the tank is suitable for transporting the material.

For grades of LPG considered corrosive, the words "NOT FOR Q and T TANKS" must be added to the shipping paper, following the basic description.

**172.203(h)(2)**

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**STUDENT RESPONSE NOTE 35**

QT MC 330 or MC 331 cargo tanks may transport noncorrosive liquid petroleum gas (LPG), and the shipping paper must have the notation "NONCORROSIVE" or "NONCOR." QT MC 330 and MC 331 cargo tanks may not transport corrosive LPG and the shipping paper must say "NOT FOR Q and T TANKS."

**36****ADDITIONAL ENTRIES  
WATER**

- ☐ Type of packages
- ☐ Number of each type of package
- ☐ Gross mass of each
  - Package
  - or
  - Type of package
- ☐ Name of shipper

Water shipments of hazardous material must have the following shipping paper entries:

- the type of packages - barrels, drums, boxes;
- the number of each type of package;
- the gross mass of each individual or type of package; and
- the name of the shipper.

**172.203(i)**

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**STUDENT RESPONSE NOTE 36**

Shipping papers for water shipments of hazardous materials must identify the type, number of packages as well as the gross mass of each package type, or the individual gross mass of each package.

37

ADDITIONAL ENTRIES TECHNICAL NAMES			
Symbols	Hazardous materials descriptions and proper shipping names	Hazard class or Division	Identification Numbers
(1)	(2)	(3)	(4)
	Articles, explosive, extremely insensitive or Articles, EEI	1.6N	UN0480
	Articles, explosive, n.o.s.	1.4S	UN0349
	Articles, explosive, n.o.s.	1.4B	UN0350
G	Articles, explosive, n.o.s.	1.4C	UN0351
G	Articles, explosive, n.o.s.	1.4D	UN0352
G	Articles, explosive, n.o.s.	1.4G	UN0353
	Articles, explosive, n.o.s.	1.1L	UN0354

The letter “G” in Column (1) of the HMT identifies n.o.s. and generic proper shipping names requiring a technical name.

172.203(k)

38

ADDITIONAL ENTRIES			
HM	No. of Units	Shipping Description	Total Quantity
	1 Box	Corrosive liquids, nos (Sulfuric acid), 8, UN 1760, PG III	30 L
		OR	
	1 Box	Corrosive liquids, nos, 8, UN 1760, PG III (contains Sulfuric acid)	30 L
Emergency Contact: 1-800-424-9300			
This is to certify that the above-named materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transportation.			

If a hazardous material is described on a shipping paper by one of the proper shipping names listed in 172.101 and identified with the letter “G” in Column (1) of the HMT, the technical name must be shown in parentheses in association with the proper shipping name. The word “contains” also may be used with the technical name, if appropriate.

172.203(k)

### Student Activity

Look up the proper shipping name “Corrosive liquids, n.o.s.” in the HMT.

The n.o.s. description does not name the hazardous constituent. In this case, the hazardous constituent is Sulfuric Acid. Sulfuric Acid is not listed by name in the HMT but meets the definition of a corrosive material. Therefore, the technical name, Sulfuric Acid, must be added in parentheses in association with the basic description. In other words, add the technical name following:

- the proper shipping name or
- after the basic description.

**Examples:** Corrosive liquids, n.o.s (Sulfuric Acid), 8,  
UN 1760, PG III  
or  
Corrosive liquids, n.o.s, 8, UN 1760, PG III,  
(contains Sulfuric Acid)

172.202(d); 172.203(k)

## STUDENT RESPONSE NOTE 37-38

The letter “G” identifies proper shipping names for which one or more technical names of the hazardous material must be entered in parentheses in association with the basic description.

39

ADDITIONAL ENTRIES			
HM	No. of Units	Shipping Description	Total Quantity
		Organic peroxides, type B, solid, 5.2,	300 kg
		UN 3102, PG II, (dibenzoyl peroxide,	
		52-100%)	
		Organic peroxides, type E, solid, 5.2,	300 kg
		UN 3108, PG II, (dibenzoyl peroxide,	
		paste, < 52%)	
<div style="border: 1px solid black; padding: 5px;"> <div style="text-align: center;">DIVISION 5.2</div> <div style="text-align: center;">GENERIC ORGANIC PEROXIDES:</div> <div style="text-align: center;">-Technical Names</div> <div style="text-align: center;">-Concentration</div> </div>			
Emergency Contact: 1-800-424-9300			
<small>This is to certify that the above-named materials are properly are in proper condition for transportation according to the appropriate requirements of the appropriate regulations.</small>			

For Division 5.2 (Organic peroxides) which may qualify for more than one listing depending on concentration, the technical name must include:

- the actual concentration being shipped, or
- the concentration range.

**172.203(k)**

40



A NOS entry that describes a mixture or solution of two or more hazardous materials must include the technical names of at least two of the components most predominant to the hazards of the mixture or solution.

**Example:** Flammable liquids, corrosive, nos,  
(contains Methanol, Potassium hydroxide), 3,  
UN 2924, PG II

**172.203(k)(2)**

## STUDENT RESPONSE NOTE 39-40

A NOS entry that describes a mixture or solution of two or more hazardous materials must include the technical names of at least two components most predominant to the hazards of the material.

## 41

**ADDITIONAL ENTRIES  
MARINE POLLUTANTS**

On shipping paper in association with basic description:

- Enter "Marine Pollutant"
- In parentheses, identify "component(s)" that make the material a marine pollutant

Sometimes the basic description of a marine pollutant does not identify the component that makes the material a marine pollutant. If not identified, the marine pollutant component name(s) must be added, in parentheses, in association with the basic description. The words "Marine Pollutant" shall be entered in association with the basic description.

**172.203(l)**

**STUDENT RESPONSE NOTE 41**

If not identified in the proper shipping name, the components making the material a marine pollutant must be entered on the shipping paper, in association with the basic description.

## 42

**ADDITIONAL ENTRIES**

**Motor Fuel Anti-Knock Mixtures  
(Tetraethyl lead), 6.1, UN1649, PGI,  
or  
Motor Fuel Anti-Knock Mixtures,  
6.1, UN1649, PGI, (Tetraethyl lead)**

Poisonous or toxic materials in PG I or II are subject to 172.203(m). Sometimes the basic description of a poison or toxic (liquid or solid) does not identify the specific poisonous or toxic constituent by that name. If not identified, the technical name of the constituent must be added, in parentheses, in association with the basic description.

**172.203(k)(1), 172.203(m)(1)-(2)**

**43****ADDITIONAL ENTRIES  
POISON OR TOXIC****Table entry -**

Allyl chloride, 3, UN1100, I

**Shipping paper entry -**

Allyl chloride, 3, UN1100, PGI, poison

Allyl chloride, 3, UN1100, PGI, toxic

If the material meets the definition of a poison or toxic, in PG I or II, and the fact that the material is a poison is not indicated by:

- the proper shipping name or
- the hazard class,

the word “Poison” or “Toxic” must be entered on the shipping paper in association with the shipping description.

**172.203(m)(1)****Student Activity**

Look up the shipping name Allyl chloride in the HMT, 172.101. Allyl chloride is a proper shipping name.

Look in Column 3. The hazard class is 3 (Flammable liquid). Look in Column 5. The packing group is PG I.

Now look in Column 6. The material is required to be labeled FLAMMABLE LIQUID and POISON or TOXIC. This means that the subsidiary hazard is poison or toxic and is not indicated by the proper shipping name or the hazard class. Therefore, you must write the word “Poison” or “Toxic” on the shipping paper in association with the shipping description.

---

**STUDENT RESPONSE NOTE 42-43**

If the proper shipping name or the hazard class or division does not identify a PG I or PG II poison or toxic (liquid or solid) as a poison or toxic, then the word “Poison” or “Toxic” must be added to the shipping description.

---

44

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**ADDITIONAL ENTRIES****Material meets inhalation toxicity criteria**

- "Poison Inhalation Hazard"
- "Zone"
  - Zone A, B, C, or D for gases
  - or
  - Zone A or B for liquids

For a material meeting the “poisonous or toxic by inhalation” criteria:

- the words “Poison-Inhalation Hazard” or “Toxic-Inhalation Hazard” and
- the appropriate hazard zone
- “Zone A,” “Zone B,” “Zone C,” or “Zone D” for gases, or
- “Zone A” or “Zone B” for liquids

must be on the shipping paper. Enter “Poison-Inhalation Hazard” or “Toxic-Inhalation Hazard” and the appropriate hazard zone (A, B, C, or D) immediately following the shipping description.

**172.203(m)(3)**

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**STUDENT RESPONSE NOTE 44**

A material that meets the poisonous or toxic by inhalation criteria must be identified on the shipping paper. Enter “Poison-Inhalation- Hazard” or “Toxic-Inhalation Hazard” and the appropriate hazard zone immediately following the shipping description.

## 45

**ADDITIONAL ENTRIES**

Emergency Contact: 1-800-255-3924

This is to certify that the above-named materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transportation.

Signer: *Shelly M. Gault*  
Date: *3/5/99*

SAFETY BEGINS WITH YOU!

An emergency response telephone number must be:

- entered on the shipping paper immediately after each hazardous material description; or
- if the telephone number applies to all hazardous materials listed on the shipping paper,
  - entered only once,
  - in a clearly visible location, and
  - with an indication that the number is for emergency response information.

**Example:** EMERGENCY CONTACT: (\_\_\_\_) \_\_\_\_/\_\_\_\_  
**172.201(d); 172.604(a)(3)**

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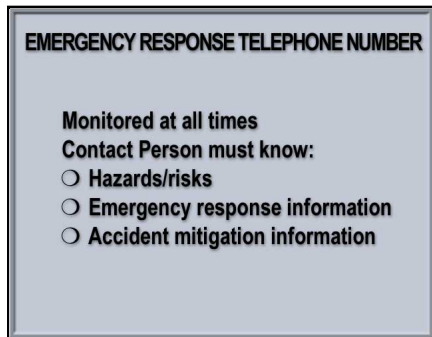
**STUDENT RESPONSE NOTE 45**

For hazardous material shipments, an emergency response telephone number is required on the shipping papers.

**Student Activity**

Turn to page 37 in your manual and follow the instructions for Work Project SP-2. When you have completed the work project and checked your work for accuracy, either review the work project with the instructor or check the answers on page 48 and 49. Please pause the presentation while you complete the Student Activity.

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**46**

The emergency response telephone number must be monitored at all times while the hazardous material is in transportation, including storage incidental to transportation.

The contact person must be knowledgeable of:

- hazardous characteristics,
- emergency response information and
- incident mitigation information for the hazardous material(s) listed on the shipping paper,

or have immediate access to someone who has that knowledge.

**172.604(a)(1-2)**

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**STUDENT RESPONSE NOTE 46**

The emergency response telephone number must be monitored at all times while the material is in transportation, including storage incidental to transportation. The contact person must be capable of providing emergency response and incident mitigation information immediately, upon request.



**47**

EMERGENCY RESPONSE TELEPHONE NUMBER
Shipper's telephone number or Other agency telephone number
<input type="radio"/> Capable of and accepts responsibility
<input type="radio"/> Has current information

The emergency response telephone number must be that of the shipper or an agency or organization capable of, and accepting responsibility for, providing current information.

**172.604(b)**

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**STUDENT RESPONSE NOTE 47**

An emergency response telephone number must be monitored and maintained at all times while the material is in transportation or storage incidental to transportation. The number may be monitored and maintained by:

- the shipper or
- an agency or organization capable of, and accepting responsibility for, providing the required information.

**48**

EMERGENCY RESPONSE INFORMATION
<input type="radio"/> Basic description and technical name(s) (of hazardous materials)
<input type="radio"/> Health Hazards
<input type="radio"/> Risks - fire/explosions
<input type="radio"/> Immediate precautions
<input type="radio"/> Firefighting methods
<input type="radio"/> Spill/leak containment
<input type="radio"/> First aid measures

Emergency response documents must contain information on:

- basic description and technical name of the hazardous material as required by 172.202 and 172.203(k);
- immediate hazards to health;
- risks of fire and explosion;
- immediate precautions to be taken in the event of an accident or incident;
- immediate methods for handling fires;
- immediate methods for handling spills or leaks in the absence of fire; and
- preliminary first aid measures.

**172.602(a)**

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49

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**EMERGENCY RESPONSE INFORMATION**

Printed legibly in English on:

- ☐ Shipping paper
- or
- ☐ Other document with shipping paper
  - Material Safety Data Sheet (MSDS)
  - Emergency response guidance document
  - Notification to PIC (Aircraft)
  - Dangerous cargo manifest (Vessel)

The required emergency response information must be available for use away from the package of hazardous material. It must be printed in English and presented in any one of the following ways:

- on the shipping paper;
- in a document, such as a material safety data sheet (MSDS), along with the shipping paper; or
- in a separate document, such as an emergency response guidance document, that cross-references the description of the hazardous materials on the shipping paper.

**172.602(b)**

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**STUDENT RESPONSE NOTE 48-49**

Information about hazardous materials and the necessary immediate precautions and actions to take in the event of a spill or leak are required for emergency response personnel. The information must be available, in English, away from the package.

**50****EMERGENCY RESPONSE INFORMATION****Maintained:**

- Highway/Rail - same manner as shipping papers
- Aircraft - same as notification to pilot-in-command
- Vessel - same as dangerous cargo manifest
- Immediately accessible to:
  - Motor vehicle operators
  - Train crews
  - Flight crews
  - Bridge personnel
  - Facility personnel

Except for aircraft and vessel shipments, each hazardous material carrier must maintain and carry the emergency response information in the same manner as the shipping paper. The information must be immediately accessible to the transport vehicle operator or crew.

For aircraft, the emergency response information must be maintained in the same manner as the notification to the pilot-in-command.

For vessel shipments, the information must be maintained in the same manner as the dangerous cargo manifest.

Operators of facilities such as loading docks and warehouses must maintain information on hazardous materials they handle. This information must be immediately accessible in the event of an accident or incident.

**172.602(c)(1-2)**

**51****INCIDENT**

The operator **MUST** notify the carrier in the event of an incident.

Each carrier must instruct the operator of a motor vehicle, train, aircraft or vessel to contact the carrier in the event of an incident.

**172.606(a)**

## 52



If a transport vehicle carrying hazardous materials is separated from the operator cab, the vehicle must be marked with the motor carrier's telephone number or the shipping papers and emergency response information must be readily available on the transport vehicle.

**172.606(b)**

## STUDENT RESPONSE NOTE 50-52

Except for aircraft and vessels, carriers must carry the required emergency response information in the same manner as shipping papers. Facility operators must have information immediately accessible in the event of an emergency.

## 53

The last shipping paper entry is the certification that the hazardous materials are properly offered for transportation according to the HMR.

**172.204(a)**

## 54

The regulations provide three certification methods for the shipping paper. For domestic transportation only, the first certification, if used, must be shown word for word.

**172.204(a)(1)**

55

**SHIPPER CERTIFICATION**

I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

Note: In line one of the certification, the words "herein-named" may be substituted for the words "above named"

SAFETY BEGINS WITH YOU!

The second certification should be used for international transportation and may be used for domestic transportation.

172.204(a)(2)

56

**SHIPPER CERTIFICATION**

I hereby certify that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packaged, marked and labeled, and in proper condition, for carriage by air according to applicable national governmental regulations.

All Modes:

Air:

This shipment is within the limitations prescribed for passenger aircraft/cargo aircraft only (delete nonapplicable).

SAFETY BEGINS WITH YOU!

The third certification is used primarily for air shipments, but may be used in all modes. For air shipments,

- add the statement, "This shipment is within the limitations prescribed for passenger aircraft/cargo aircraft only;"
- delete the type of aircraft that does not apply;
- provide two copies of the certification.

172.204(c)

57

**SHIPPER SIGNATURE**

Emergency Contact: 1-800-255-3924

This is to certify that the above-named materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transportation.

Signed: *[Signature]*

Date: 6-4-10-99

SAFETY BEGINS WITH YOU!

The shipper must enter the selected certification on the shipping paper and sign it, manually, by typewriter, or by other mechanical means.

172.204(d)

## STUDENT RESPONSE NOTE 53-57

Section 172.204(a) requires the shipper to provide on the shipping paper a written, signed certification that the hazardous materials are properly prepared for transportation.

## 58



Except for hazardous waste, shipping paper certification is not required for:

- a hazardous material transported by highway:
- in a cargo tank motor vehicle provided by the carrier,
- by the shipper as a private carrier, or
- the return of an empty tank car containing a HM residue.

Shipping paper certification is required for:

- all hazardous waste shipments, or
- if a hazardous material is re-shipped or transferred from one carrier to another.

**172.204(b)**

## 59



Only certain radioactive materials may be transported by passenger carrying aircraft. The person offering the shipment must sign a printed statement that the material is intended for research or medical diagnosis or treatment. Do not accept the shipments for passenger carrying aircraft unless the shipping paper has this signed certification.

**172.204(c)(4); 173.448(f)**

### STUDENT RESPONSE NOTE 58-59

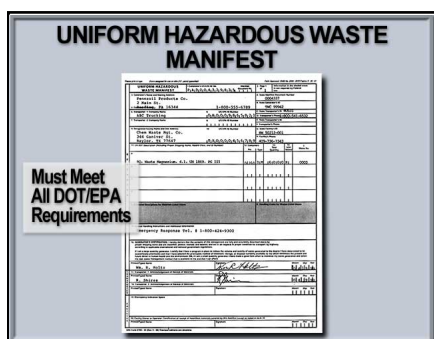
For radioactive material shipments by passenger carrying aircraft, the shipping paper must state that the material is intended for research or medical diagnosis or treatment.

If you are a carrier, do not accept the shipment for passenger carrying aircraft, if not so stated.

**60**

For all hazardous waste shipments, a Uniform Hazardous Waste Manifest (UHW) must be prepared in accordance with USDOT and Environmental Protection Agency (EPA) regulations. The original copy of the manifest must be dated, signed by hand and carried in the same manner as a shipping paper.

**40 CFR Part 262; 172.205(a), (c)**

**61**

The UHW meets the USDOT's shipping paper requirements, provided it contains all the information required by the USDOT and the EPA.

**40 CFR Part 262; 172.205(h)**

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**STUDENT RESPONSE NOTE 60-61**

All hazardous waste shipments must be accompanied by a Uniform Hazardous Waste Manifest (UHW). The UHW may be used as a shipping paper if it meets USDOT requirements.

## 62

**UNIFORM HAZARDOUS WASTE MANIFEST**

Shipper (Generator)  
Carrier 1  
Carrier 2  
Carrier 3

Retain for three years

The shipper/generator must prepare the UHWM and provide a copy for each carrier and each designated waste facility. The waste shipper, each waste carrier and facility operator must retain a copy of the UHWM for three years from date the waste was accepted by the initial carrier.

**40 CFR Part 262; 172.205(e)**

## STUDENT RESPONSE NOTE 62

The Uniform Hazardous Waste Manifest (UHWM) must be retained by the waste shipper, and waste carrier(s). Keep the UHWM for three years from the date the waste was accepted by the initial carrier.

## 63

**SUMMARY**

Must have Properly Prepared Shipping Paper

- ☐ Proper shipping name
- ☐ Hazard class or division
- ☐ Identification number
- ☐ Packing group
- ☐ Total Quantity
- ☐ Additional entries
- ☐ Shipper certification
- ☐ Emergency response information
- ☐ Emergency response telephone number

If you are a shipper, be sure the accompanying paperwork is accurate and contains all required information before you offer a shipment of hazardous material.

If you are a carrier, verify the information on the shipping paper. If the paperwork is not correct or the packages are not intact, do not accept the shipment!

Shipments that comply with the HMR make transportation of hazardous materials safer for everyone, including you.





This concludes the instruction and practice portion of this module. Now is the time to assess how well the module taught you. This will be an open book test. There are no “trick” questions. Unless instructed otherwise, please complete the **Module 2 Test**. The **Module 2 Test** begins on page 39 of your Instructor Manual.

**Instructor Note:**

Please check test answers, record scores and update training records. Review test results with students.

**STUDENT RESPONSE NOTE ANSWERS** begin on page 43.

**WORK PROJECT ANSWERS** begin on page 46.

**MODULE 2 TEST ANSWERS** begin on page 50.

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# Shipping Paper Summary

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This module assumes that materials used in the exercises of student activity projects, have already been classified by the manufacturers or shippers.

To prepare a shipping paper, include the following information:

Proper Shipping Name.....	172.202(a)(1)
Hazard Class or Division .....	172.202(a)(2)
ID No .....	172.202(a)(3)
Packing Group (PG) .....	172.202(a)(4)
Total Quantity and Unit of Measurement .....	172.202(a)(5), (c)
Required Additional Information .....	172.203(a-o)
Shipper Certification.....	172.204 (a)-(d)
Emergency Contact Telephone Number .....	172.201(d), 172.604
Emergency Response Information .....	172.602

# Compliance Checklist

Shipping Paper	Violation	Reference
1. Shipping Paper		172.200(a)
2. Contents		
(a) Order/Color/"x"		172.201(a)(1)
(b) Legible English		172.201(a)(2)
3. Shipping Name		172.202(a)(1)
4. Hazard Class or Division		172.202(a)(2)
5. Identification Number		172.202(a)(3)
6. Packing Group		172.202(a)(4)
7. Total Quantity/Unit of Measurement		172.202(a)(5) & (c)
8. Sequence		172.202(b)
9. Additional Descriptions		
(a) Exemption		172.203(a)
(b) Limited Quantity		172.203(b)
(c) Hazardous Substance		172.203(c)
(d) Radioactive Materials		172.203(d)
(e) Empty Packaging		172.203(e)
(f) Air Requirements		172.203(f)
(g) Rail Requirements		172.203(g)
(h) Highway Requirements		172.203(h)
(i) Water Requirements		172.203(i)
(j) Dangerous When Wet		172.203(j)
(k) Technical Names and N.O.S.		172.203(k)
(l) Marine Pollutant		172.203(l)
(m) Poisonous Materials (toxic)		172.203(m)
(n) Elevated Temperature		172.203(n)
(o) Organic Peroxides and Self Reactive Materials		172.203(b)
10. (a) Emergency Response Information		172.602(a)-(c)
(b) Emergency Telephone Number		172.201(d), 172.604(a)
11. Hazardous Waste Manifest		172.205(a)
Signatures – Originals		172.205(c)(1)&(2)
Signatures – Copies		172.205(d)

Shipper Certification	Violation	Reference
1. Basic Paragraph		
a. General Requirements		172.204(a)(1)or(2)
b. Air Certification		172.204(c)
2. Signature		172.204(d)

**Note:** The Federal hazmat transportation law (§5110, Chapter 51) requires the retention of the shipping paper for one year by the offeror and carrier.

# Work Projects

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## Shipping Paper Work Project

### Work Projects SP-1

#### **To the Instructor**

---

The objective of this work project is to provide a practical shipping paper exercise. The student is provided with four shipping paper entries on one shipping paper form, Work Project SP-1, and a compliance checklist.

#### **Directions to Student(s)**

---

Notice that Work Project SP-1 has a list of four (4) descriptions of materials, hazardous and non-hazardous, entered on form SP-1. Determine whether or not the shipping description for each hazardous material is correct as shown.

If an entry is incorrect, place an “x” in the appropriate box on the compliance checklist.

In the violation column of the shipping paper, list the number of the violation from the compliance checklist. The violation number precedes the listed shipping paper category, for example: 1. Shipping paper.

#### **Self-Evaluation**

---

This work project will evaluate your skill and facility in use of Hazardous Materials Regulations in determining the shipping paper requirements. When you have completed and checked your work for accuracy, either review the work project with the instructor or check the answers on pages 46 and 47.

## Shipping Paper Work Project

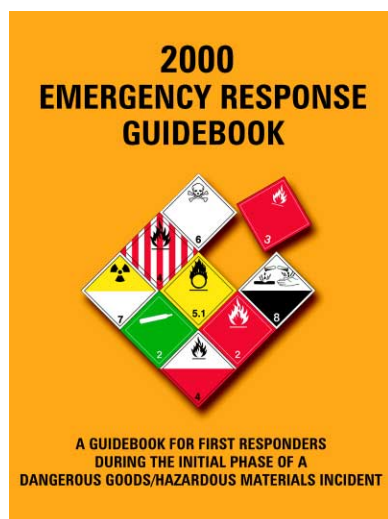
### Work Project SP-1

No. of Units	HM	Description and Classification (Proper Shipping Name and Class or Division per HMT)	Total Quantity	Violation Number
		Clothing in Boxes	50 lbs	
		Zinc Permanganate, 5.1, UN 1515	20 kg	
		Acetone, UN1090, 3, PG II	10	
		Cartons Stationery	40 lbs	
		Emergency Contact (202) 000-0000		

### Shipping Papers Compliance Checklist

This is to certify that the above named materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transportation.

*Bob Smith*



Shipping Paper	Violation	Reference
1. Shipping Paper		172.200(a)
2. Contents		
(a) Order/Color/"x"		172.201(a)(1)
(b) Legible English		172.201(a)(2)
3. Shipping Name		172.202(a)(1)
4. Hazard Class or Division		172.202(a)(2)
5. Identification Number		172.202(a)(3)
6. Packing Group		172.202(a)(4)
7. Total Quantity/Unit of Measurement		172.202(a)(5) & (c)
8. Sequence		172.202(b)
9. Additional Descriptions		
(a) Exemption		172.203(a)
(b) Limited Quantity		172.203(b)
(c) Hazardous Substance		172.203(c)
(d) Radioactive Materials		172.203(d)
(e) Empty Packaging		172.203(e)
(f) Air Requirements		172.203(f)
(g) Rail Requirements		172.203(g)
(h) Highway Requirements		172.203(h)
(i) Water Requirements		172.203(i)
(j) Dangerous When Wet		172.203(j)
(k) Technical Names and N.O.S.		172.203k
(l) Marine Pollutant		172.203(l)
(m) Poisonous Materials (toxic)		172.203(m)
(n) Elevated Temperature		172.203(n)
(o) Organic Peroxides and Self Reactive Materials		172.203(b)
10. (a) Emergency Response Information		172.602(a)-(c)
(b) Emergency Telephone Number		172.201(d), 172.604(a)
11. Hazardous Waste Manifest		172.205(a)
Signatures – Originals		172.205(c)(1)&(2)
Signatures – Copies		172.205(d)

Shipper Certification	Violation	Reference
1. Basic Paragraph		
a. General Requirements		172.204(a)(1)or(2)
b. Air Certification		172.204(c)
2. Signature		172.204(d)

# **Shipping Paper Work Project**

## **Work Project SP-2**

### **To the Instructor**

---

The objective of this work project is to provide the student with a practical shipping paper exercise. The student is provided with four shipping paper entries on one shipping paper form, Work Project SP-2, and a compliance checklist.

### **Directions to Student(s)**

---

Notice that Work Project SP-2 has a list of three (3) descriptions of materials, hazardous and non-hazardous, entered on form SP-2. Determine whether or not the shipping description for each hazardous material is correct as shown.

If an entry is incorrect, place an “x” in the appropriate box on the compliance checklist.

In the violation column of the shipping paper, list the number of the violation from the compliance checklist. The violation number precedes the listed shipping paper category, for example: 1. Shipping paper.

### **Self-Evaluation**

---

This work project will evaluate your skill and facility in use of Hazardous Materials Regulations (HMR) in determining shipping paper requirements. When you have completed and checked your work for accuracy, either review the work project with the instructor or check the answers on pages 48 and 49.

## Shipping Paper Work Project

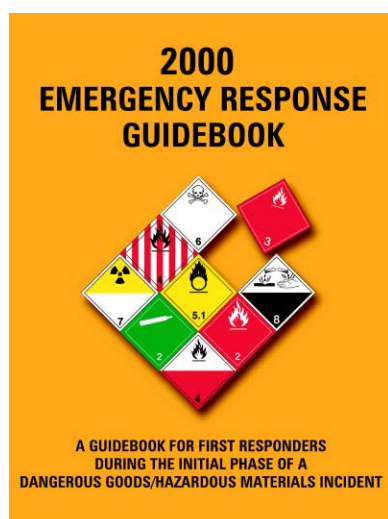
### Work Project SP-2

No. of Units	HM	Description and Classification (Proper Shipping Name and Class or Division per HMT)	Total Quantity	Violation Number
5 CTNS		Cyclopentane, 3 Ltd. Qty., UN 1145, PG II	120 kg	
2		Flammable Liquids, NOS, 3, UN 19993, PG III	50 kg	
1		Aldrin, 6.1, NA 2762, PG II	25 kg	

### Shipping Papers Compliance Checklist

This is to certify that the above named materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transportation.

*Bob Smith*



Shipping Paper	Violation	Reference
1. Shipping Paper		172.200(a)
2. Contents		
(a) Order/Color/"x"		172.201(a)(1)
(b) Legible English		172.201(a)(2)
3. Shipping Name		172.202(a)(1)
4. Hazard Class or Division		172.202(a)(2)
5. Identification Number		172.202(a)(3)
6. Packing Group		172.202(a)(4)
7. Total Quantity/Unit of Measurement		172.202(a)(5) & (c)
8. Sequence		172.202(b)
9. Additional Descriptions		
(a) Exemption		172.203(a)
(b) Limited Quantity		172.203(b)
(c) Hazardous Substance		172.203(c)
(d) Radioactive Materials		172.203(d)
(e) Empty Packaging		172.203(e)
(f) Air Requirements		172.203(f)
(g) Rail Requirements		172.203(g)
(h) Highway Requirements		172.203(h)
(i) Water Requirements		172.203(i)
(j) Dangerous When Wet		172.203(j)
(k) Technical Names and N.O.S.		172.203(k)
(l) Marine Pollutant		172.203(l)
(m) Poisonous Materials (toxic)		172.203(m)
(n) Elevated Temperature		172.203(n)
(o) Organic Peroxides and Self Reactive Materials		172.203(b)
10. (a) Emergency Response Information		172.602(a)-(c)
(b) Emergency Telephone Number		172.201(d), 172.604(a)
11. Hazardous Waste Manifest		172.205(a)
Signatures – Originals		172.205(c)(1)&(2)
Signatures – Copies		172.205(d)

Shipper Certification	Violation	Reference
1. Basic Paragraph		
a. General Requirements		172.204(a)(1)or(2)
b. Air Certification		172.204(c)
2. Signature		172.204(d)

# Module 2 Test

1. The required basic description on a shipping paper must be in the following sequence \_\_\_\_\_ .
  - a. hazard class or division, proper shipping name, ID No., packing group
  - b. ID No., PG, hazard class or division, proper shipping name
  - c. proper shipping name, ID No., PG, hazard class or division
  - d. proper shipping name, hazard class or division, ID No., PG
2. When a hazardous material and a material not subject to the regulations are entered on the same document, the hazardous material(s) entries must be \_\_\_\_\_.
  - a. entered first
  - b. highlighted
  - c. entered in a contrasting color
  - d. identified by an “X” in the column captioned HM
  - e. any of the above
3. What letters are to be entered on the shipping paper for a hazardous substance?
  - a. HM
  - b. RQ
  - c. HS
  - d. FL
4. Which of the following basic descriptions of hazardous materials is correct?
  - a. Corrosive liquids, nos (contains Caprylyl chloride), 8, UN 1760, PG II
  - b. Corrosive liquids, nos, 8, UN 1760, PG II (Caprylyl chloride)
  - c. Corrosive liquids, nos, (Caprylyl chloride), 8, UN 1760, PG II
  - d. All of the above
5. Each person who offers a hazardous material to an aircraft operator for air transportation shall provide \_\_\_\_\_.
  - a. three (3) copies of the required certification
  - b. two (2) copies of the required certification
  - c. one (1) copy of the required certification
  - d. four (4) copies of the required certification
6. Except for shipments of hazardous waste, a shipping paper must consist of \_\_\_\_\_.
  - a. a specific form prescribed by the USDOT
  - b. one (1) original and three (3) copies
  - c. no specific form as long as the required information is present
  - d. a specific form prescribed by the Environmental Protection Agency (EPA)



7. Unless excepted, the shipping paper offered by a shipper for a shipment of hazardous materials must contain\_\_\_\_\_.
- the date when the shipment was offered
  - the initials of the person accepting the shipment
  - a certification signed by the shipper
  - a USDOT registration number for hazardous materials
8. Except for hazardous waste, a shipper certification is not required for a hazardous material that is \_\_\_\_\_.
- transported in a cargo tank supplied by the carrier
  - transported by the shipper as a private carrier, unless re-shipped or transferred to another carrier
  - transported as a Limited Quantity
  - a and b
9. The shipper certification for other than a hazardous waste may be signed \_\_\_\_\_.
- manually
  - by typewriter or other mechanical means
  - a signature is not required
  - a and b
10. The shipper certification found in 172.204(a)(1) may be used for \_\_\_\_\_.
- highway transportation
  - aircraft transportation
  - water and rail transportation
  - all of the above
11. Shipping descriptions of hazardous materials required to be shown on shipping papers must be\_\_\_\_\_. (Select the best answer)
- in the language of the consignee country for international shipments
  - in English for all shipments
  - in English for domestic shipments only
  - none of the above
12. Which of the following is a proper shipping description for a 1 liter package containing Nitrating acid, less than 40%, hazard class 8 (corrosive) material, to be transported by aircraft?
- 8, NA 1796, Nitrating acid, PG II, 1 L, Cargo Aircraft Only
  - 1 L, Nitrating acid, 8, NA 1796, PG II, Cargo Aircraft Only
  - 1 L, Nitrating acid mixtures, 8, UN 1796, PG II, Cargo Aircraft Only
  - Nitrating acid mixtures, 8, UN 1826, PG II, Cargo Aircraft Only, 1 L

13. Which of the following is a proper shipping description for a 1-liter package of Oleum with 40% Sulfur Trioxide, Class 8 material, being transported by truck?
- 8, Sulfuric acid fuming, NA 1831, PG I, Poison, 1 liter
  - 1 L, Sulfuric acid fuming, 8, UN 1831, PG I, Poison-Inhalation Hazard, Zone B
  - Oleum, 8, UN 1831, PG I, 1 L
  - None of the above
14. In addition to the basic description required by 172.202, additional descriptions would be required for which of the following?
- A hazardous material package offered for air transportation and authorized to be transported aboard passenger carrying aircraft
  - A shipment of hazardous material packaged and offered as “Limited Quantity”
  - A shipment of radioactive materials
  - b and c
15. If a hazardous material described by a proper shipping name listed in 172.203(k) is a mixture or solution of two or more hazardous materials, the technical names of at least \_\_\_\_\_ components most predominantly contributing to the hazard(s) of the material must be shown.
- one
  - three
  - two
  - all that are present
16. A hazardous material meeting the inhalation toxicity criteria must be identified with the notation \_\_\_\_\_ .
- Dangerous
  - Haz/Mat
  - Poison-Inhalation Hazard
  - Zone A, B, C, or D (as appropriate)
  - c and d
17. Emergency response information, containing the information required by 172.602(a), can be presented on \_\_\_\_\_ .
- a shipping paper
  - a material safety data sheet
  - a shipping paper and an emergency response guidance manual
  - any of the above

18. The emergency response telephone number required to be entered on the shipping paper must be that of \_\_\_\_\_ .
- the fire department
  - the shipper
  - an agency that accepts responsibility and can provide current information
  - b or c
19. When a hazardous material is transported in a rail car requiring placarding, the shipping paper must bear the notation \_\_\_\_\_ .
- “DO NOT LOAD NEXT TO A TANK CAR”
  - “PLACARDED,” followed by the name of the required placard
  - “DANGEROUS, NO SMOKING”
  - “RAIL CAR SUBJECT TO INSPECTION”
  - none of the above
20. Which is the correct additional entry for a shipment of Anhydrous ammonia containing 0.2% water transported in an MC 331 cargo tank constructed of quenched and tempered (Q and T) steel?
- “Noncorrosive”
  - “Not for Q and T Tanks”
  - “0.2 PERCENT WATER”
  - “Corrosive Hazard”
21. For shipments by water, which of the following must be added to the shipping paper description?
- The type of packages
  - The number of each type
  - The gross weight of each type of package
  - All of the above
22. The additional entry “Cargo Aircraft Only” must be entered on the shipping paper following the basic description when \_\_\_\_\_ .
- a hazardous material is prohibited aboard a domestic aircraft
  - a hazardous material is authorized aboard a passenger-carrying aircraft
  - a hazardous material is forbidden aboard a passenger-carrying aircraft
  - a hazardous material is intended for medical use only
23. The shipping paper for a shipment of hazardous material by water must contain \_\_\_\_\_ .
- the name of the carrier
  - the name of the shipper
  - the name of the port of export
  - the name of the first mate

# Answer Sheets

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## Student Response Note Answers

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- 1-3 A shipping paper may be in any form or format as long as it contains the information required by the HMR in the correct sequence.
- 4-5 The basic description of a hazardous material includes: the proper shipping name, hazard class or division, ID No., and packing group (PG) if any is assigned. Shipping papers must also list all required additional entries.
- 6-17 The shipping paper must accurately communicate the hazard(s). It must list the basic description, that is: the proper shipping name, hazard class or division, ID No., and PG.
- 18 The shipping description includes the proper shipping name, hazard class or division, ID No., and PG plus the total quantity of the hazardous material.
- 19 The total quantity, the type of packaging and destination marks may be entered before or after the basic description.
- 20 List total quantity before and/or after the basic description. You may abbreviate the type of package and the unit of measurement.
- 21-26 A mixed shipment of hazardous and non-hazardous material, must identify the hazardous material by: listing the HM first, or marking in the “HM” column an “X” or the letters “RQ”.
- 27 If shipment is made under an exemption, the shipping paper must include the letters “DOT-E” and the exemption number.
- 28 For a limited quantity shipment, the words “Limited Quantity” or the abbreviation “Ltd. Qty.” must be entered, following the basic description.
- 29 On the shipping paper, identify hazardous substances with the letters “RQ” before or after the basic description.
- 30-31 For a packaging containing hazardous material residue, the phrase “RESIDUE: Last Contained \*\*\*” may appear on the shipping paper. For any residue in a tank car, “RESIDUE: Last Contained \*\*\*” must appear on the shipping paper.
- 32 “Cargo Aircraft Only” must be entered on the shipping paper after the basic description when the material is prohibited or forbidden on passenger carrying aircraft.

- 33 For hazardous materials transported in a rail car, freight container, transport vehicle or portable tank, the reporting mark and number must be on the shipping paper.
- 34 Anhydrous ammonia:
- If 0.2 percent or more water has been added, the shipping paper must have the notation “0.2 PERCENT WATER.”
  - If 0.2 percent water has not been added, the shipping paper must say, “NOT FOR Q AND T TANKS.”
- 35 QT MC 330 or MC 331 cargo tanks may transport noncorrosive liquid petroleum gas (LPG), and the shipping paper must have the notation “NONCORROSIVE” or “NONCOR.” QT MC 330 and MC 331 cargo tanks may not transport corrosive LPG and the shipping paper must say “NOT FOR Q and T TANKS.”
- 36 Shipping papers for water shipments of hazardous materials must identify the type, number of packages as well as the gross mass of each package type, or the individual gross mass of each package.
- 37-38 The letter “G” identifies proper shipping names for which one or more technical names of the hazardous material must be entered in parentheses in association with the basic description.
- 39-40 A NOS entry that describes a mixture or solution of two or more hazardous materials must include the technical names of at least two components most predominant to the hazards of the material.
- 41 If not identified in the proper shipping name, the components making the material a marine pollutant must be entered on the shipping paper, in association with the basic description.
- 42-43 If the proper shipping name or the hazard class or division does not identify a PG I or PG II poison or toxic (liquid or solid) as a poison or toxic, then the word “Poison” or “Toxic” must be added to the shipping description.
- 44 A material that meets the poisonous or toxic by inhalation criteria must be identified on the shipping paper. Enter “Poison-Inhalation- Hazard” or “Toxic-Inhalation Hazard” and the appropriate hazard zone immediately following the shipping description.
- 45 For hazardous material shipments, an emergency response telephone number is required on the shipping papers.
- 46 The emergency response telephone number must be monitored at all times while the material is in transportation, including storage incidental to transportation. The contact person must be capable of providing emergency response and incident mitigation information immediately, upon request.

- 47 An emergency response telephone number must be monitored and maintained at all times while the material is in transportation or storage incidental to transportation. The number may be monitored and maintained by:
- the shipper or
  - an agency or organization capable of, and accepting responsibility for, providing the required information.
- 48-49 Information about hazardous materials and the necessary immediate precautions and actions to take in the event of a spill or leak are required for emergency response personnel. The information must be available, in English, away from the package.
- 50-52 Except for aircraft and vessels, carriers must carry the required emergency response information in the same manner as shipping papers. Facility operators must have information immediately accessible in the event of an emergency.
- 53-57 Section 172.204(a) requires the shipper to provide on the shipping paper a written, signed certification that the hazardous materials are properly prepared for transportation.)
- 58-59 For radioactive material shipments by passenger carrying aircraft, the shipping paper must state that the material is intended for research or medical diagnosis or treatment. If you are a carrier, do not accept the shipment for passenger carrying aircraft, if not so stated.
- 60-61 All hazardous waste shipments must be accompanied by a Uniform Hazardous Waste Manifest (UHW). The UHW may be used as a shipping paper if it meets USDOT requirements.
- 62 The Uniform Hazardous Waste Manifest (UHW) must be retained by the waste shipper, and waste carrier(s). Keep the UHW for three years from the date the waste was accepted by the initial carrier.

## Shipping Paper Work Project Answers

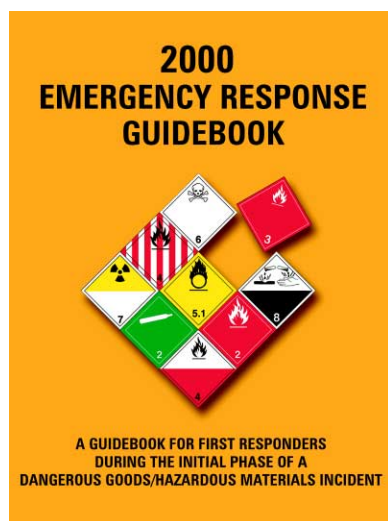
### Work Project SP-1

No. of Units	HM	Description and Classification (Proper Shipping Name and Class or Division per HMT)	Total Quantity	Violation Number
		Clothing in Boxes	50 lbs	
		Zinc Permanganate, 5.1, UN 1515	20 kg	1, 2(a), 6
		Acetone, UN1090, 3, PG II	10	1, 2(a), 7, 8
		Cartons Stationery	40 lbs	
		Emergency Contact (202) 000-0000		

### Shipping Papers Compliance Checklist

This is to certify that the above named materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transportation.

*Bob Smith*



Shipping Paper	Violation	Reference
1. Shipping Paper	X	172.200(a)
2. Contents		
(a) Order/Color/"X"	X	172.201(a)(1)
(b) Legible English		172.201(a)(2)
3. Shipping Name		172.202(a)(1)
4. Hazard Class or Division		172.202(a)(2)
5. Identification Number		172.202(a)(3)
6. Packing Group	X	172.202(a)(4)
7. Total Quantity/Unit of Measurement	X	172.202(a)(5) & (c)
8. Sequence	X	172.202(b)
9. Additional Descriptions		
(a) Exemption		172.203(a)
(b) Limited Quantity		172.203(b)
(c) Hazardous Substance		172.203(c)
(d) Radioactive Materials		172.203(d)
(e) Empty Packaging		172.203(e)
(f) Air Requirements		172.203(f)
(g) Rail Requirements		172.203(g)
(h) Highway Requirements		172.203(h)
(i) Water Requirements		172.203(i)
(j) Dangerous When Wet		172.203(j)
(k) Technical Names and N.O.S.		172.203(k)
(l) Marine Pollutant		172.203(l)
(m) Poisonous Materials (toxic)		172.203(m)
(n) Elevated Temperature		172.203(n)
(o) Organic Peroxides and Self Reactive Materials		172.203(b)
10. (a) Emergency Response Information		172.602(a)-(c)
(b) Emergency Telephone Number		172.201(d), 172.604(a)
11. Hazardous Waste Manifest		172.205(a)
Signatures – Originals		172.205(c)(1)&(2)
Signatures – Copies		172.205(d)

Shipper Certification	Violation	Reference
1. Basic Paragraph		
a. General Requirements		172.204(a)(1) or (2)
b. Air Certification		172.204(c)
2. Signature		172.204(d)

## Explanation of Answers

### Work Project SP-1

Section 172.200(a) places a responsibility on the person offering the hazardous materials for transportation “to describe the hazardous materials in the manner prescribed by the Hazardous Materials Regulations.”

The shipping paper is not prepared as required, because:

- **Hazardous materials are not distinguished from non-hazardous materials. 172.201(a)(1)**

The hazardous materials were **not** described first, entered in a contrasting color or highlighted or identified by an “x” in the column captioned “HM.”

- **No PG shown for Zinc permanganate.**
- **Total quantity is incorrect. 172.202(a)(5)(c)**

The total quantity for Acetone does not show the unit of measurement.

- **Sequence is incorrect. 172.202(b)**

The basic description should read: proper shipping name, hazard class or division number, ID No. and PG or Acetone, 3, UN 1090, PG II.



## Shipping Paper Work Project Answers

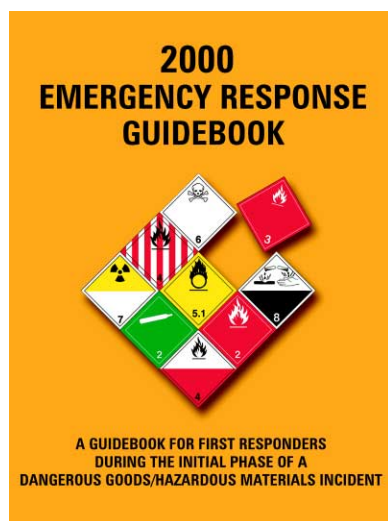
### Work Project SP-2

No. of Units	HM	Description and Classification (Proper Shipping Name and Class or Division per HMT)	Total Quantity	Violation Number
5 CTNS		Cyclopentane, 3 Ltd. Qty., UN 1145, PG II	120 kg	1, 9(b)
2		Flammable Liquids, NOS, 3, UN 19993, PG III	50 kg	1, 9(k)
1		Aldrin, 6.1, NA 2762, PG II	25 kg	1, 9(c)
				1, 10(b)

### Shipping Papers Compliance Checklist

This is to certify that the above named materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transportation.

*Bob Smith*



Shipping Paper	Violation	Reference
1. Shipping Paper	X	172.200(a)
2. Contents		
(a) Order/Color/"X"		172.201(a)(1)
(b) Legible English		172.201(a)(2)
3. Shipping Name		172.202(a)(1)
4. Hazard Class or Division		172.202(a)(2)
5. Identification Number		172.202(a)(3)
6. Packing Group		172.202(a)(4)
7. Total Quantity/Unit of Measurement		172.202(a)(5) & (c)
8. Sequence		172.202(b)
9. Additional Descriptions		
(a) Exemption		172.203(a)
(b) Limited Quantity	X	172.203(b)
(c) Hazardous Substance	X	172.203(c)
(d) Radioactive Materials		172.203(d)
(e) Empty Packaging		172.203(e)
(f) Air Requirements		172.203(f)
(g) Rail Requirements		172.203(g)
(h) Highway Requirements		172.203(h)
(i) Water Requirements		172.203(i)
(j) Dangerous When Wet		172.203(j)
(k) Technical Names and N.O.S.	X	172.203(k)
(l) Marine Pollutant		172.203(l)
(m) Poisonous Materials (toxic)		172.203(m)
(n) Elevated Temperature		172.203(n)
(o) Organic Peroxides and Self Reactive Materials		172.203(b)
10. (a) Emergency Response Information		172.602(a)-(c)
(b) Emergency Telephone Number	X	172.201(d), 172.604(a)
11. Hazardous Waste Manifest		172.205(a)
Signatures – Originals		172.205(c)(1)&(2)
Signatures – Copies		172.205(d)

Shipper Certification	Violation	Reference
1. Basic Paragraph		
a. General Requirements		172.204(a)(1) or (2)
b. Air Certification		172.204(c)
2. Signature		172.204(d)

## **Explanation of Answers**

### **Work Project SP-2**

Section 172.200(a) places a responsibility on the person offering the hazardous materials for transportation “to describe the hazardous materials in the manner prescribed by the Hazardous Materials Regulation.”

The shipping paper is not prepared as required, because:

- The additional entry, Ltd. Qty., is not in the proper sequence. 172.203(b)  
Ltd. Qty. must be entered on the shipping paper following the basic description of the hazardous material.
- Aldrin is not identified as a hazardous substance. 172.203(c)  
The hazardous substance’s “RQ” must be entered in the column captioned “HM” or entered following the basic description. The reportable quantity (RQ) is 0.454 kg. Therefore, Aldrin, as described, exceeds the RQ.
- The technical name is missing. 172.203(k)  
Flammable liquids, nos, does not contain the technical name, in parentheses, in association with the basic description.
- The emergency response telephone number is missing. 172.201(d)  
The emergency response telephone number must be entered on the shipping paper in a clearly visible location. [See 172.604(a)(3)]

**Module 2 Test Answers**

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<b>Question</b>	<b>Answer/Explanation</b>	<b>49 CFR Reference</b>
1.	d. Answers a, b and c are incorrect because the entries are not in sequence.	172.202(b)
2.	e. Any of the options in a, b, c or d may be used to describe hazardous materials.	172.201(a)(1)
3.	b. The letters RQ mean that the package contains a reportable quantity (RQ) of a hazardous substance and must be so identified, when required. Answers a, c and d are not authorized abbreviations.	172.203(c)(2)
4.	d. All may be used to describe hazardous material.	172.202(d); 172.203(k)
5.	b. Two copies of the certification are required; a, c, and d are incorrect.	172.204(c)(2)
6.	c. Answer a is incorrect because there is no prescribed USDOT form. Answer b is incorrect because there is no requirement for an original and three (3) copies of a shipping paper. Answer d is incorrect because the EPA only requires a specific form for hazardous waste.	171.8
7.	c. Unless excepted, a shipper certification is required to be printed on a shipping paper in the manner prescribed. Answers a, b and d are not required.	172.204(a)
8.	d. a and b Exceptions to shipping paper certification are provided in 172.204(b). Certification exceptions for shipments identified as limited quantities are not provided.	

9. d. 172.204(d)(2)  
Answer c is incorrect because a signature is required for each certification.
10. d.  
The certification in 172.204(a)(1) may be used in all modes.
11. b. 172.201(a)(2)  
All required shipping descriptions must be printed in English, regardless of origin or destination.
12. c. 172.202(a)(2)  
Answers a and b are not correct because they are out of sequence, and the shipping name is not correct. 172.202(a)(1) and (b). Answer d is not correct because an incorrect ID No. is used. It should be UN 1796.
13. b. 172.202(a)(1), (a)(2)  
Answer a is not correct because it is out of sequence. 172.202(b). Answer c is not correct because the shipping name used is in italics in the HMT, and is, therefore, not a proper shipping name.
14. d. 172.203(b); 172.203(d)  
Answer a is not correct because the shipment is authorized for passenger-carrying aircraft and no additional entries are required.
15. c. 172.203(k)(2)
16. e. 172.203(m)(3)  
Answers a and b are incorrect because there is no requirement for these entries to be added to the shipping paper description.
17. d. 172.602(b)(3)  
Either a, b or c may be used.
18. d. 172.604(b)  
Answer a is incorrect because the telephone number of the shipper or an agency capable of and accepting responsibility for the required information must be entered on the shipping paper.

19. e. 172.203(g)  
There is no requirement for the entries in a, b, c, and d to be added to the shipping paper.
20. c. 172.203(h)(1)  
Answer a is incorrect because the entry is only required for liquefied petroleum gas 172.203(h)(2)(i). Answer b is incorrect because the entry is only required for cargo tanks containing anhydrous ammonia with less than 0.2 percent water by weight. 172.203(h)(1)(i)-(ii). Answer d is incorrect because there is no requirement for this entry to be added to the shipping paper.
21. d. 172.203(i)  
All must be added to the shipping paper, a, b and c.
22. c. 172.203(j)  
Answer a is incorrect because, if prohibited, the material may not be offered or transported in any case. Answer b is incorrect because the material may be transported on a passenger carrying aircraft; therefore, the “cargo only aircraft” restriction would not apply. Answer d is incorrect because the “Cargo Aircraft Only” notation does not restrict material to medical use.
23. b. 172.201(b)  
Answers a, c and d are incorrect because there is no requirement for these entries to be included on the shipping paper.